Ilco EZ®-Clone PLUS

Operating manual

D437174XA
vers. 1.0

GB

A Member of the Kaba Group

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GENERAL

This machine has been designed according to CE norms. The materials used in its manufacture are not dangerous and their use makes the machine comply to standards. The machine and all its parts are completely safe to use.

Instructions manual

The instructions manual provided with the machine is essential to its proper use and to carry out the necessary maintenance.
We therefore recommend protecting the manual from damage in a safe sheltered place, easily to hand for quick consultation.

Residual risks

There are no residual risks arising from use of the machine.

Protection and safety precautions for the operator

The operations for which the machine has been designed are easily carried out at no risk to the operator.
The machine is designed with features which make it completely safe in all its parts.

Safety

To operate in complete safety, before using the machine read and fully comprehend the concepts, instructions and regulations described in this user's manual.

- Periodically check the electric wiring. If the wires are frayed or worn, repair or replace immediately.
- Always work with dry hands, cleaning any grease or oil from them.
- Always disconnect the machine when it is not in use or when carrying out maintenance operations.
- Do not tug at the electric wiring and ensure that it does not come into contact with oil, sharp objects or heat. Never remove the earth wire from the plug.
- Ensure that the earth wire is always properly connected.
- Do not use the machine in dangerous environments (damp or wet).
- Always work in a well-illuminated location.
- Keep the working area clear and remove any tools from around the machine before turning it on.
- Any visitors, especially children, must stand at a safe distance from the machine and not be allowed to touch it or any of the wiring.
- Do not use the machine for purposes different from those described in this manual.
- Do not use the machine if the ON/OFF switch is not working properly.

Power supply

The machine is supplied through a 15 VDC universal power provider, supplied with the machine.

Start-up

The machine is started up by means of the master switch (E).

Machine identification

The machine is provided with an identification label which shows the serial number (Fig. 1)

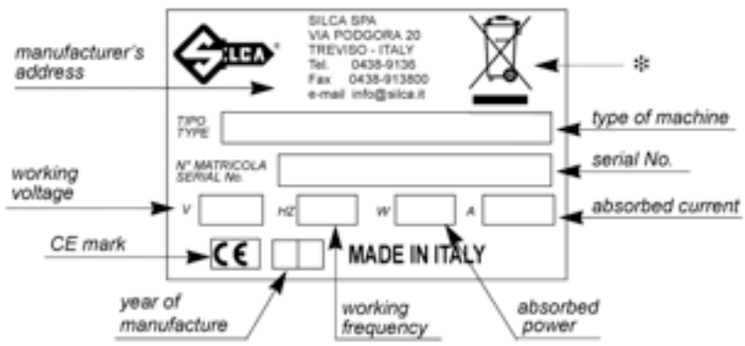

Fig. 1

(*) see chap. 10 WASTE DISPOSAL, page 42

1. MACHINE DESCRIPTION

The machine is used to easily duplicate many types of transponder keys for vehicles (125 KHz).

In particular, the machine is able to read and display the electronic code stored in the memory of Philips*, Megamos*, Temic* and Texas Instruments Instruments* transponders used on the keys, and re-write it on a blank transponder.
The machine works alone or connected to a personal computer. A functions menu is incorporated to meet all the needs arising during operation.
For a list of car makes and models whose keys can be copied, consult the articles published in the Kaba Ilco catalogs and updates.

1.1. Main Features

Operation modes

- copier/detector - transponder reader/writer
- stand-alone

Special functions

- interface with HOLDEN - COMMODORE
- program in various languages

Software updating

- The machine can be updated by connection to a personal computer via RS232 or USB.

Power supply

- Directly from the mains through an external universal power provider and special cable.

1.2. Technical data

Power supply

- Universal AC/DC power supply in compliance with directive 2006/95/CE; carries UL mark: 100/240 VAC - 50/60 Hz/15 VDC - 3 A
- machine: 12-18VDC - 10W

Antenna field frequencies

- 125 KHz

Dimensions

Width 9.5” (24.1 cm)
Length 6.5” (16.5 cm)
Depth 3.25” (8.26 cm)

Weight

- .61 lbs (.27 Kg)

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1.3. Working parts

The structure of the machine is extremely simple.

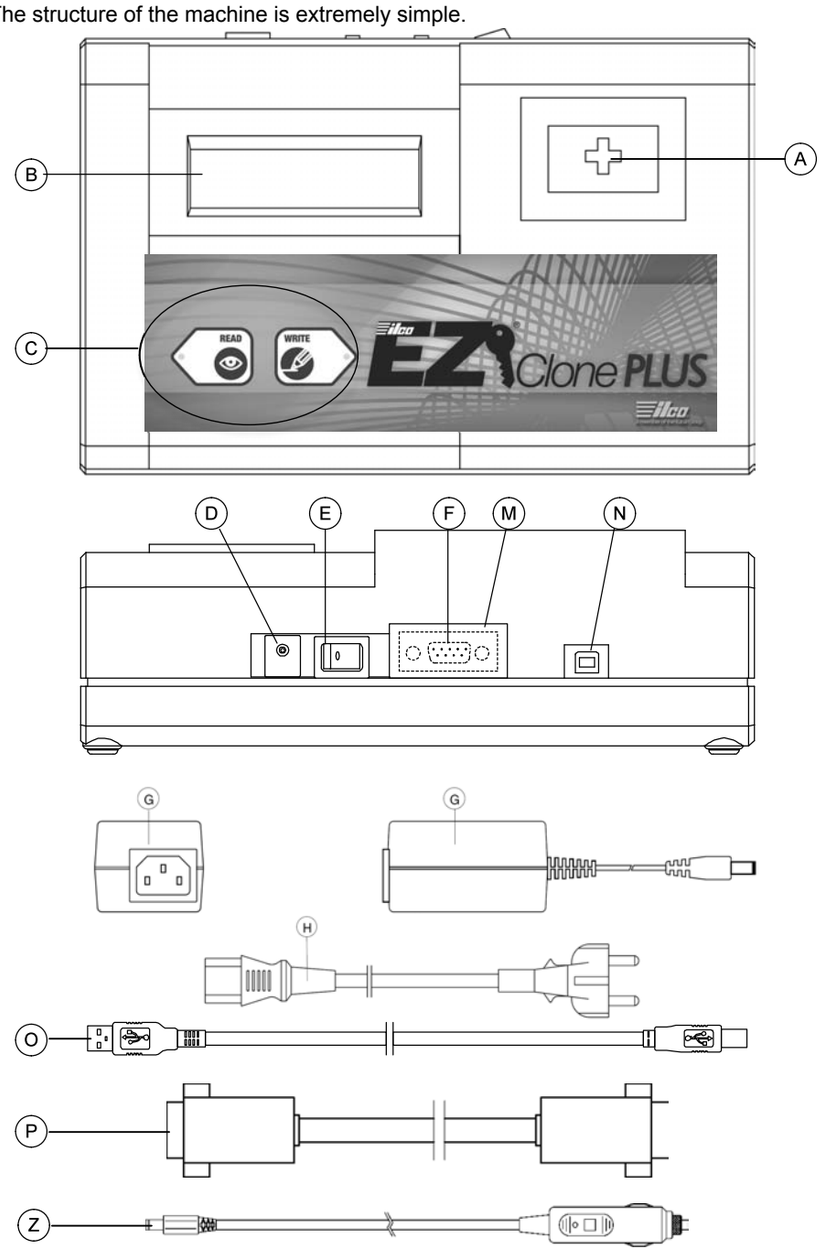

Fig. 2

A - reading/writing antenna
B - liquid crystal display for 20 + 20 characters (2 lines)
C - 2 key keyboard
D – 12-18 VDC power supply socket
E - master switch (POWER ON)
F - RS232 connector (9-pole)
G - 15V D.C. power provider
H - power supply cable
M - cover
N - USB connector
O - USB cable
P - serial cable
Z – 12V cigarette lighter power supply cable

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1.4. Special features

KEYBOARD

The incorporated keyboard (Fig. 2, page 7), allows the user to interact with the machine quickly and easily. At any given time the keys are enabled only for the cycle in progress.
The illuminating LED next to each key guides the operator in using the key in the way described below:

LED off	key CANNOT BE USED
LED on	key CAN BE USED
LED flashing	key CAN BE USED for optional functions

Fig. 3

The following keys are available:

READ
the key starts the transponder reading procedure or is used to go back to the beginning of the operating flow in progress

WRITE
the key starts the transponder writing procedure or is used to go to the next stage in the operating flow in progress

LIQUID CRYSTAL DISPLAY

Alphanumeric display with 2 lines of 20 characters each, illuminated from behind.

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1.5. Symbols used on the display

The boxes are organized to supply information about what the operator can or must do by using the keys available.
The first line may be fixed or scrolling, according to the message to be shown.

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y	
◄	R	E	A	D																

The second line suggests the keys to use and the function associated to them:

◄	R	E	A	D									W	R	I	T	E	►

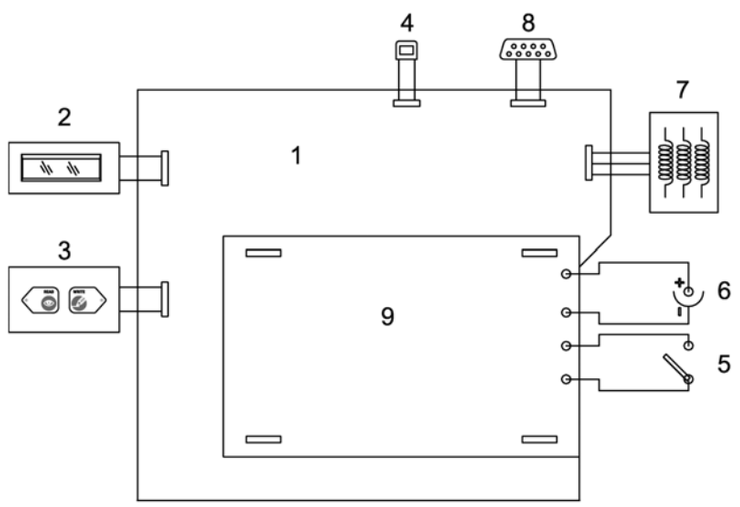
◄	B	A	C	K						C	O	N	T	I	N	U	E	►

1.6. Electrical/electronic circuit

MAIN PARTS

1. **PRINTED CIRCUIT BOARD:** contains the microprocessor which runs the key reading/writing operations, the supply circuits, interface with the keyboard and display and the connectors between the antennas and personal computer.
2. **DISPLAY** liquid crystal, retro-illuminated, 2 lines of 20 characters.
3. Control **KEYBOARD** with 2 keys.
4. **USB RECEPTACLE**
5. **MASTER SWITCH**
6. **MAINS SUPPLY SOCKET** 15V/350 mA
7. **ANTENNAS** for reading/writing tuned to 125 kHz
8. **RS232 9 pole RECEPTACLE**
9. **CBOX-MB expansion board**

OPERATIONAL ELECTRICAL BLOCK/CIRCUIT DIAGRAM



2. TRANSPORT

The machine is easily transported and is not dangerous to handle. The packed machine can be carried by one person.

2.1. Packing

The packing is designed to ensure safe transportation and protect the machine and all its parts.

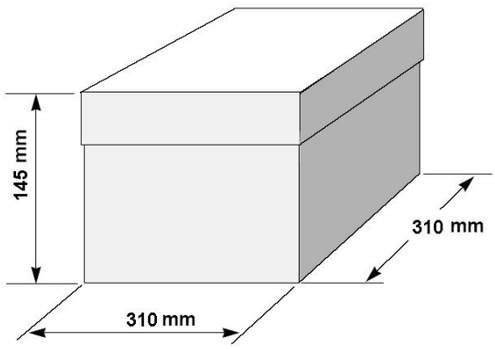


Fig. 4

2.2. Transport

It is advisable to use the packing every time the machine is transported, as this will avoid knocks causing damage.

2.3. Unpacking

To remove the machine from the packing box:

1. it is advisable to open the box without damaging it so that it may be used again (removals, dispatch to manufacturers for repairs or servicing);

2. check the contents of the box, which should comprise:
- 1 machine
- 1 universal power provider
- 1 power cable
- 1 serial cable
- 1 USB cable
- 1 set of documents, including: operating manual and spare parts list
- 1 CD-ROM
- 1 12V cigarette lighter power supply cable

2.4. Machine handling

When the machine has been unpacked, place it directly on its workbench.

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3. ACCESSORIES PROVIDED

- The machine is supplied complete with:
- universal power provider;
- power cable;
- serial cable;
- USB cable;
- user's manual;
- CD-ROM for stand-alone operation (to be used only if the program installed on the machine is lost)
- 12V cigarette lighter power supply cable

4. MACHINE INSTALLATION AND PREPARATION

The machine can be installed by the purchaser and does not require any special skills; it is supplied ready for use. However, some checks and preparation for use need to be carried out by the operator.

4.1. Preparation for use - preliminary operations

turn on and select local operation (stand-alone);
set up the language.

4.2. Checking for damage

The machine is solid and compact and will not normally damage if transport, unpacking and installation have all been carried out according to the instructions in this manual.
However, it is always advisable to check that the machine has not suffered any damage.
Should faults be found which are not due to the above mentioned risks, contact Kaba Ilco Tech Support.

4.3. Environmental conditions

The machine working alone operates at an ambient temperature of -20 to +55°C.
To ensure that the best use is made of the machine and relative keys with transponders, the operating temperature should be restricted. **Given the characteristics of the transponder on the key blanks THE KEYS MUST BE CODED IN AN ENVIRONMENT WITH A TEMPERATURE OF 20°C OR OVER.**
The ideal conditions for the machine are therefore:

- temperature between 20 and 40°C;
- relative humidity approx. 60%.

4.4. Positioning

The machine does not require a special location; simply place on a horizontal surface of suitable size.

ATTENTION: **the universal feeder provided with the machine and any electronic equipment should be placed at least 50 cm from the antenna to avoid their generating interference which could affect reading and/or writing of the transponder (see Fig. 5, page 12).**

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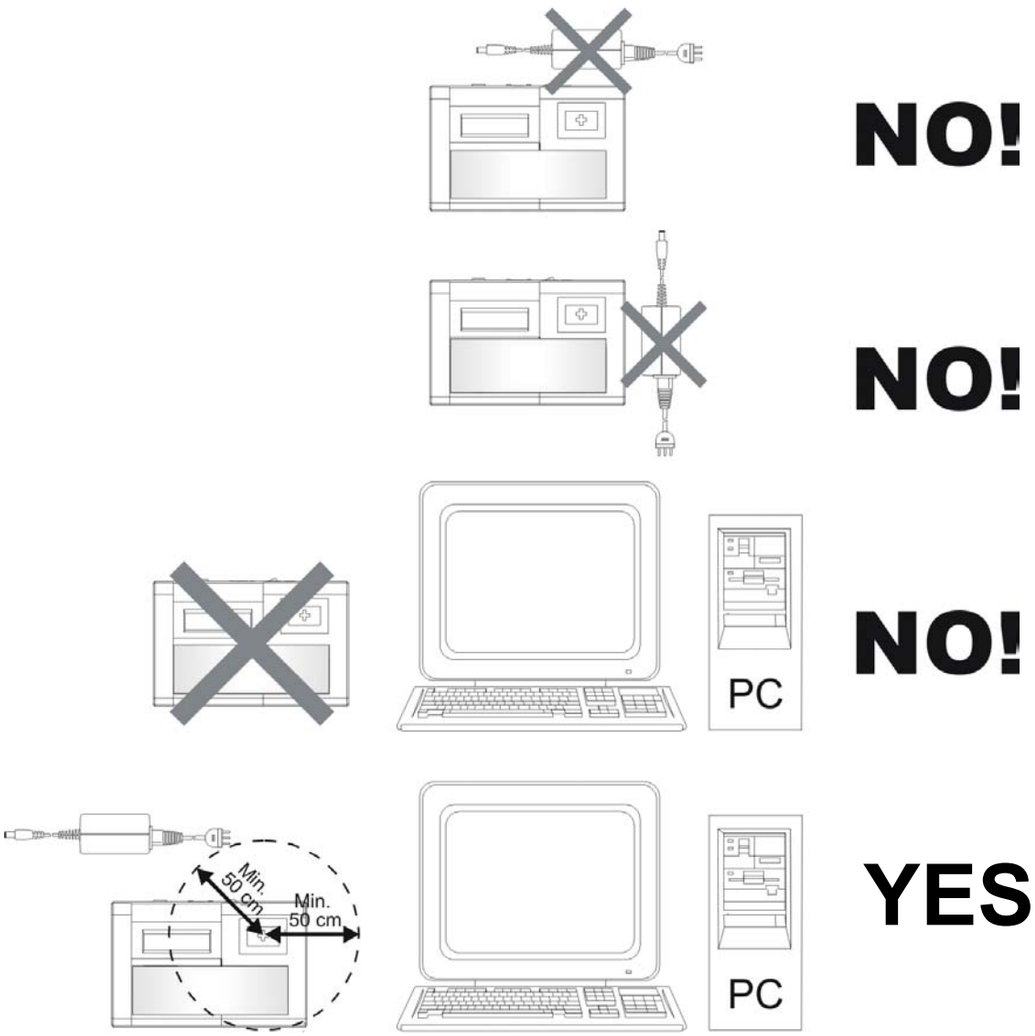

Fig. 5

4.5. Software update

The machine's on-board software can be updated (for future expansion) through a personal computer, USB port or RS232 serial port.

ATTENTION: **the USB and RS232 inputs necessary for connection to a personal computer is placed on the back of the machine.**

Use the USB or RS232 cable, and follow the instructions given on the update CD-ROM.

5. REGULATION AND SETTING OF THE MACHINE

The machine does not need any setting or regulation.

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6. COM-CODE* MODULE FOR CODING HOLDEN-COMMODORE KEYS (OPTIONAL)

6.1. Operative parts

Q power cord (provided on the Com-Code module)
O serial cable (provided on the Com-Code module)
G universal input (provided on the machine)
P computer connection serial cable (provided on the machine)
N Com-Code
R power lead from vehicle cigarette lighter (provided with Com-Code module) (Fig. 7)

N1 module power input connector
N2 serial connector for PC connection
N3 machine power input connector
N4 serial connector for machine connection
N5 power supply warning light

* Used for Holden Commodore only

6.2. Installation

No special skill is required to connect the module to the machine; use the two cords ‘Q – power input’ and ‘O – serial’ provided on the Com-Code module.

6.3. Use

The module does not interfere with machine connection to a PC.
Both the machine and the module can be powered through the vehicle cigarette lighter.
The two figures "Fig. 6" and "Fig. 7" show the various uses for the machine and module.

N.B: whatever power supply configuration is chosen, the module is active only if the red light (N5) is on.

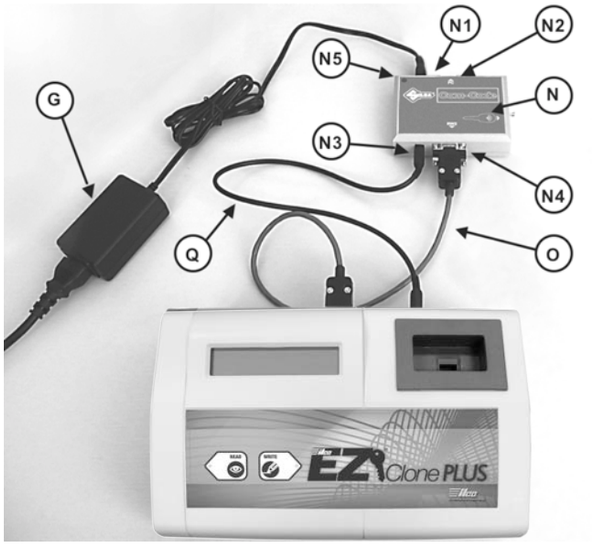

Fig. 6

Machine and module powered by the universal input (with or without connection to a PC).

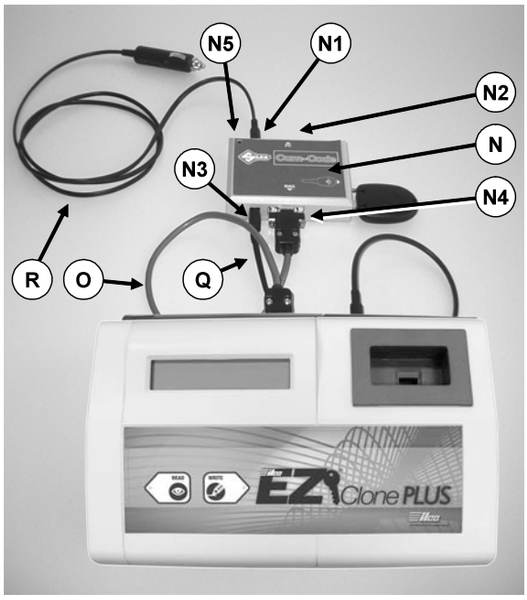

Fig. 7

Machine and module powered from cigarette lighter (with or without connection to personal computer).

6.4. Software upgrade and use with PC

Software for both the machine and the module is upgraded separately and independently through the connections shown in Fig. 8. Use an RS 232 serial cable of less than 3 metres in length or an USB cable and follow the instructions provided with the upgrade CD-ROM.

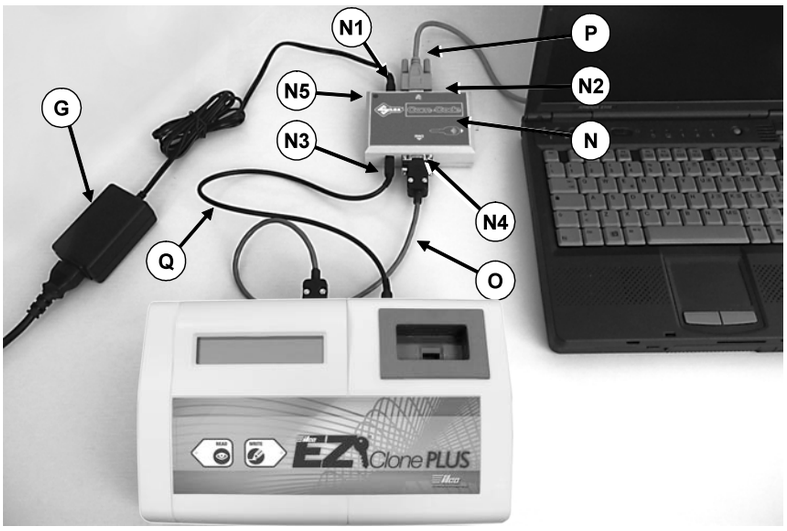

Fig. 8

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7. USE OF THE MACHINE

This chapter describes all the operations for copying, identifying, reading and writing a transponder key.
Also described is the use of the Com-Code module for coding Holden Commodore keys.

7.1. Ignition

			V	E	R	.		X	X	.	Y	Y	.	z	z	z			

The general wording " VER. XX.YY.ZZZ" indicates the version of internal program on the Ilco EZ®-Clone Plus.

If the HOLDEN MODULE is connected to the device the ignition screen on the display will show:

			V	E	R	.		X	X	.	Y	Y	.	z	z	z			
H	O	L	D	E	N		M	O	D		V	E	R		x	x	.	y	y

including the internal software version on the HOLDEN MODULE
After a few seconds (approx. 3):

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y
◄	R	E	A	D															

Led READ ON
Led WRITE OFF
◄ FLASHING

7.2. Reading

Fit the key all the way into the special hole on the front of the machine (antenna), then confirm that the key must be read by pressing the **READ** button**.**

The reading operation will start. For a few seconds there appears:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S
				W	A	I	T	.	.	.									

Led READ OFF
Led WRITE OFF

If there are problems during transponder reading (no transponder, cannot be copied, crypto, reading error, etc) a warning message will appear.

Below are some examples:

	T	R	A	N	S	P	O	N	D	E	R		N	O	T		D	E	T	E	C	T	E	D	
◄	B	A	C	K																					

Led READ ON
Led WRITE OFF

	C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E
◄	B	A	C	K						T	Y	P	E	-	-															

Led READ ON
Led WRITE OFF

If the electronic code is read successfully, there appears:

R	E	A	D	I	N	G		S	U	C	C	E	S	S	F	U	L		
			R	E	M	O	V	E		K	E	Y							

Led READ OFF
Led WRITE OFF

7.2.1 Calculation for Texas Instruments Crypto transponder (**60,61,62,63,64,65,**67,68,69,70,XX,6F)

If a TEXAS INSTRUMENTS crypto transponder is being copied, when the key is removed the display will show:

	K	E	Y		D	A	T	A		P	R	O	C	E	S	S	I	N	G	.	.	.	.	W	A	I	T			
◄	S	T	O	P							x	x	/	9	9		-														

Led READ ON
Led WRITE OFF

To interrupt the operation hold the READ button down for 2 seconds.

The number shown from 00 to 99 indicates progression of the calculation. This operation may take up to 15 minutes.

If calculation is not successful, two error conditions may occur:

a)

	C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E
◄	B	A	C	K																										

In this case the original key cannot be copied as it CANNOT BE COPIED.

b)

I	N	T	E	R	N	A	L		C	B	O	X		E	R	R	O	R		C	O	D	=	X	X					
◄	B	A	C	K																										

In this case an internal error has occurred (COD = YY) in operation of the circuit board dedicated to calculating. Try again. If the problem persists contact the after-sales service, providing the error code shown.

If calculation is successful the device will proceed with the writing operation.

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7.2.2 Special cases in reading

If the transponder is a PHILIPS CRYPTO (ID = 40,44) on which the ID part can be copied:

	C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E
	T	Y	P	E	4	4					C	O	N	T	I	N	U	E	►											

Led READ OFF
Led WRITE ON

When WRITE is pressed again the display will show THE FOLLOWING QUESTION:

				C	O	P	Y		O	N	L	Y		I	D		?									
◄	N	O														Y	E	S	►							

Led READ ON
Led WRITE ON

Press the READ button to return to the beginning.
Press the WRITE button to go on to writing only the transponder ID code.

7.2.3 COPY Philips Crypto Transponder (42)

When copying a PHILIPS Crypto Transponder (42), the original key must be read for 5 to 10 seconds. Do not remove the original key from the reading antenna during the operation; wait for the message (REMOVE KEY) to appear before taking the key from the device.

7.2.4 COPY Philips Crypto Transponder (41)

When copying a PHILIPS Crypto Transponder (41), use only Kaba Ilco or Silca keys with T25 transponders. Copies on keys with T11 transponders and original Nissan keys do not work.

Note 1: A copy of a PHILIPS Crypto Transponder (41) on a transponder by a manufacturer different from Kaba Ilco or Silca may not work.

Note 2: It may not be possible to duplicate certain keys with PHILIPS Crypto Transponder (41) (see Ch. 8 - WARNING MESSAGES).

7.2.5 COPY Philips Crypto Transponder (40)

This function is used to see whether a key with Philips Crypto transponder (40) uses a fixed code immobilizer and can therefore be copied onto Kaba Ilco or Silca keys with T5 transponders or uses a crypto code immobilizer and therefore cannot be copied.

From the initial box:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y							
◄	R	E	A	D																						

Led READ ON
Led WRITE OFF

Fit the original key into the special hole and **hold down the READ button for at least 2 seconds;** the IDENTIFICATION operation will start.

For a few seconds the display shows:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S
				W	A	I	T	.	.	.									

In the former case, when the key has been read, Ilco EZ®-Clone Plus will show the following message:

P	H	I	L	I	P	S		C	R	Y	P	T	O		T	R	A	N	.	C	A	N		B	E		D	U	P	L	I	C	.	O	N		T	5
	T	Y	P	E			4	0			C	O	N	T	I	N	U	E	►																					

This means that the key can be used in fixed code mode and therefore be copied onto a Kaba Ilco or Silca key with T5 transponder.

In the latter case, when the key has been read Ilco EZ®-Clone Plus will show the following message:

	C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E
	T	Y	P	E			4	0			C	O	N	T	I	N	U	E	►												

Note: correct identification of keys that can be copied onto T5 or cannot be copied is guaranteed only if the keys read are originals or produced by Kaba Ilco or Silca.

7.2.6 COPY Philips Crypto transponder (4W)

Some Volkswagen group models produced between 2000 and 2006 ca. use a Philips Crypto transponder that is identified by Ilco EZ®-Clone Plus with ID=4W.
For some of these models (depends on the case) Ilco EZ®-Clone Plus can be used to make an operational copy of the original key.

As it is not possible to know beforehand whether the key can be copied or not, you need to use the Ilco EZ®-Clone Plus identification function:

From the initial display

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y						
◄	R	E	A	D																					

Led READ ON
Led WRITE OFF

Fit the original key into the special hole and **hold down the READ key for at least 2 seconds;** the IDENTIFICATION operation starts. For a few seconds the following message appears:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S
				W	A	I	T	.	.	.									

The machine display may show:

V	A	G		C	R	Y	P	T	O		T	R	A	N	.		C	A	N	N	O	T	D	U	P	L	I	C	A	T	E
	T	Y	P	E		4	W				C	O	N	T	I	N	U	E	►												

or:

V	A	G		C	R	Y	P	T	O		T	R	A	N	.	C	A	N		B	E		D	U	P	L	I	C	.	
	T	Y	P	E		4	W				C	O	N	T	I	N	U	E	►											

In the first case a read only transponder (4W) has been read. In the second case a read only transponder (4W) has been read and a copy can be made onto a Kaba Ilco or Silca key with T28 transponder.

Note 1: copies of Philips Crypto transponders (4W) on keys with T15 transponders or on original keys do not work
Note 2: copies of Philips Crypto transponders (4W) on transponders by manufacturers different from Kaba Ilco or Silca may not work.

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7.2.7 COPY Philips Crypto transponder (45)

When making a copy of a PHILIPS* Crypto transponder (45) the original key reading operation may take several seconds. The machine display will show the following message:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S
			W	A	I	T	.	.	.	.								ж	

take care not to remove the original key from the reading antenna during this operation, always wait for the message (READING SUCCESSFUL, REMOVE THE KEY) before removal:

R	E	A	D	I	N	G		S	U	C	C	E	S	S	F	U	L		
			R	E	M	O	V	E		K	E	Y							

VERY IMPORTANT!

If the key is removed before the machine has finished all the operations, the following message will appear:

	R	E	A	D	I	N	G		E	R	R	O	R						
<	R	E	G	E	N	.		K	E	Y	B	L	A	N	K		4	5	

at this point the key is momentarily unable to start the vehicle. In this situation **before carrying out any other operation REMOVE THE KEY FROM THE READING ANTENNA** and use the “Regenerate Key 45” function, see ch.7.3.

7.2.8 COPY Texas Instruments Crypto2 (6F) transponder

One of the features of second generation Texas Instruments* Crypto transponders is that they are retro-compatible with first generation Texas Instruments* Crypto transponders; this has made it possible for some vehicle manufacturers to use second generation Texas Instruments* Crypto transponders in vehicle control units with a first generation Texas Instruments* Crypto system that use only part of the electronic code to start the engine.

In this case only part of the potential of the second generation Texas Instruments* Crypto transponder is used, because the control unit on the vehicle uses it in retro-compatible mode. This allows vehicle makers to use only second generation Texas Instruments* Crypto transponder on original keys and original spares, whether they are used fully or partially.

It is therefore possible to copy a key with second generation Texas Instruments* Crypto transponder (type 6F) onto a Kaba Ilco EK3 or Silca EH2 key.

If you are sure that the vehicle control unit works in compatible mode with a first generation Texas Instruments* Crypto transponder, part of the electronic code can be copied onto a Kaba Ilco EK3 or Silca EH2 key to make a key that works. If this is not the case, the key will not work at all.
When trying to copy this type of key, the Ilco EZ®-Clone Plus machine will show a warning message:

T	R	A	N	S	P	O	N	D	E	R		T	E	X	A	S		CRYPTO
T	Y	P	E		6	F	-	*	*		C	O	N	T	I	N	U	E	>

Led READ OFF
Led WRITE ON

indicating that a second generation 6F type Texas Instruments* Crypto transponder has been detected.
To continue, press “WRITE” and the message will appear:

E	X	E	C	U	T	E		C	O	P	Y	?						
<	N	O													Y	E	S	>

Led READ ON
Led WRITE ON

Press “READ” to abandon the copying process and go back to the main menu. Press “WRITE” to continue with copying and start the calculation for Texas Instruments* Crypto transponders (see paragraph 7.2.1)

NOTE: A copy of a second generation Texas Instruments* Crypto transponder on a Kaba Ilco EK3 or Silca EH2 key will be detected as a first generation Texas Instruments* Crypto key (see Ch. 7.5.1**B)**

7.2.9 COPY Philips Crypto2 (46) transponder

The main characteristic of Philips* Crypto second generation transponders is that they employ a mutual authentication method with the vehicle on which they are used. In other words, differently from most other transponders, not only the vehicle control unit checks the data on the transponder, but the transponder also checks the data required by the vehicle: only after having checked the requirement, it transmits the information needed by the immobilizer system to allow engine ignition.

To make a copy of a Philips* Crypto second generation transponder you need to read the data exchanged by the transponder and immobilizer control unit through the vehicle starter.
The operation can be easily performed (as described below) with the SNOOP (OPTIONAL) device applied to the original key.

Described below is the procedure for making a copy of a Philips* Crypto2 transponder:

STAGE 1: Reading the original key and initializing SNOOP.

From the machine main menu insert the key to be copied and press “READ”:

	I	N	S	E	R	T				K	E	Y						ORIGINAL
<	R	E	A	D														

The machine reads the key and after a few seconds the display shows:

	R	E	M	O	V	E				K	E	Y						

When the key has been removed instructions are given to insert Snoop:

	I	N	S	E	R	T				S	N	O	O	P				
																>	E	N	T

When “WRITE” is pressed the machine makes some operational checks on SNOOP. If it finds data from a previously copied key the display will show:

	R	E	S	E	T		S	N	O	O	P	?						
<	N	O													Y	E	S	>

If you do not want to overwrite the data from a previously used key, press “READ” and the machine will return to the main menu. To continue press “WRITE”, the machine display will show:

	P	L	E	A	S	E				W	A	I	T	.	.	.		

Then automatically:

	R	E	M	O	V	E				S	N	O	O	P				

When SNOOP has been removed the display will show:

	W	A	I	T	I	N	G			S	N	O	O	P		D	A	T	A
<	B	A	C	K							C	O	N	T	I	N	U	E	>

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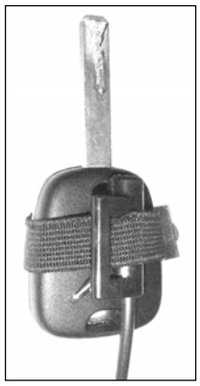
SNOOP has now been initialized to read the data exchange between the vehicle and the original key (see Stage 2).

Note: When “READ” is pressed the machine will return to the main menu so that other operations can be carried out. The copying process for the current key can be resumed later (see STAGE 3 variant B).

STAGE 2: Reading data from vehicle

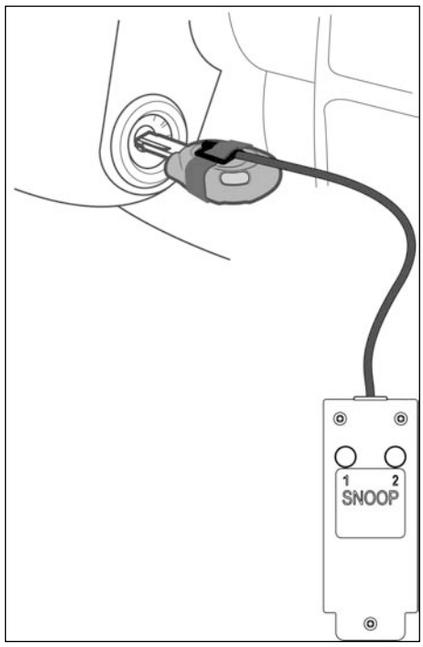
When SNOOP has been initialized, make two ignitions of the vehicle control panel with the key used in STAGE 1.
To perform this operation place the SNOOP antenna in position as shown in the figures below:

Placing the antenna in position on the key:



The SNOOP antenna must be attached to the head of the key to be copied, as shown in the illustration on the left.
Place the antenna in the middle of the key head and if necessary secure with the strip provided.

Use on the vehicle:



Insert the key into the vehicle starter.

Turn on the vehicle control panel. LED “1” on SNOOP will flash for a few seconds to indicate that the first data reading operation has been successful.

When LED “1” goes out, turn off the control panel and remove the key.

Wait 10-20 seconds or until the immobilizer warning light starts flashing, if applicable.

Insert the key into the vehicle starter.

Turn on the vehicle control panel. LED “1” on SNOOP will go on and LED “2” will flash for a few seconds to indicate that the second data reading operation has been successful.

SNOOP now has the necessary data to transmit to the machine for a copy of the original key. Turning on the vehicle control panel again will put the SNOOP LEDs on permanently, which indicates that all the necessary data has been downloaded.

If there are problems during data logging (LEDs do not go on) try:
- Place the Snoop antenna in such a position that when the key is inserted into the ignition unit the antenna can be moved away from or closer to the unit.
- Waiting 10-20 (or more) seconds between ignitions (in some cases the wait could be up to a couple of minutes).

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- Closing and opening the vehicle doors using the key control.
- Starting the engine for a few seconds.

Note: On some vehicles data is downloaded by simply inserting the key into the starter. In such cases the SNOOP LEDs illuminate. In these circumstances just insert and remove the key in the starter twice.

STAGE 3: Checking data read from the vehicle with machine awaiting data

If the Ilco EZ®-Clone Plus machine has not been used in the meantime for other operations, or has not been turned off, the display will show:

	W	A	I	T	I	N	G		S	N	O	O	O	P		D	A	T	A
<	B	A	C	K							C	O	N	T	I	N	U	E	>

When “WRITE” has been pressed you will be required to insert SNOOP:

	I	N	S	E	R	T				S	N	O	O	P					
											C	O	N	T	I	N	U	E	>

Insert SNOOP and press “WRITE”; Ilco EZ®-Clone Plus will read and check the data from SNOOP. If all is well you will be required to insert the original key used in STAGES 1 and 2:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y
<	R	E	A	D															

Press “READ” to start STAGE 4, reading and copying the key.

(If problems occur an error message will be shown, see paragraph: “Special events that could occur when copying a Philips* CR2” transponder, or Chapter 8 – “WARNING MESSAGES”).

STAGE 3, variant B: Checking data read from the vehicle with machine not awaiting data

If the Ilco EZ®-Clone Plus has been used for other operations in the meantime, or has been turned off, when STAGE 2 is over from the main menu insert the original key used in STAGES 1 and 2 and press “READ”:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y
<	R	E	A	D															

The machine reads the key and after a few seconds the display shows:

	R	E	M	O	V	E			K	E	Y								

When the key has been removed instructions are given to insert SNOOP:

	I	N	S	E	R	T				S	N	O	O	P					
											C	O	N	T	I	N	U	E	>

When “WRITE” is pressed the machine makes some operational checks on SNOOP and if the data is found to be congruent with the original key you are requested to insert the original key used in STAGES 1 and 2 again:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y
<	R	E	A	D															

Press “READ” to start STAGE 4, reading and copying the original key.

(If problems occur an error message appears; see paragraph: “Special events which could occur when copying a Philips* CR2 transponder”, or Chapter 8 – “WARNING MESSAGES”)

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STAGE 4: Reading and copying the original key

After inserting the original key and pressing “READ”:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y
<	R	E	A	D															

the calculating process for reading an original key begins:

K	E	Y		D	A	T	A		P	R	O	C	E	S	S	I	N	G	
	W	A	I	T									X	X	/	9	9		

Press ESC to interrupt the operation.

The number shown from 00 to 99 indicates that calculation is taking place. The operation could take anything from a few seconds to 3 minutes.
During this operation leave the key in the machine.
At the end of the calculating process the machine will require the key to be removed:

	R	E	M	O	V	E			K	E	Y								

When the original key has been removed you will be required to insert an EK3P key:

I	N	S	E	R	T		E	H	P		K	E	Y						
											C	O	N	T	I	N	U	E	>

Insert the EK3P electronic key then confirm key writing by pressing “WRITE”.
The key transponder is checked to see if it is compatible with the type of transponder read previously.

If problems occur when checking the electronic key (incompatible key, missing, wrong, unwritable transponder, etc) a warning message will appear; see paragraph: “Warning messages when copying a Philips* Crypto ID46 transponder”, or Chapter 8 – “WARNING MESSAGES”

The writing operation begins. For a few seconds the display shows the message:

	W	R	I	T	I	N	G		I	N									
	P	R	O	G	R	E	S	S			W	A	I	T	.	.	.		

If writing is successful the following appears:

	O	P	E	R	A	T	I	O	N		C	O	M	P	L	E	T	E	D

If problems occur when writing the transponder (writing error) a warning message will appear, see paragraph: “Special events that could occur when copying a Philips* CR2 transponder”, or Chapter 8 – “WARNING MESSAGES”.

After a few seconds you will be asked if other copies are to be made of the key with the same code; the display shows:

	O	T	H	E	R		C	O	P	I	E	S	?						
<	N	O														Y	E	S	>

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- press “READ” to continue without making other copies
- press “WRITE” to make another copy.

In this case the machine repeats the writing cycle (no need to insert the original key or re-calculate).

7.3. Regenerating keys 42 and 45

If when copying key ID 42 or ID 45 the original key is removed before reading is finished, warning message 5 will appear if the key is ID 42, or message 7 if the key is ID 45 (see Ch. 8 “WARNING MESSAGES”).
At this point the key may be momentarily unable to start the vehicle (check directly on the vehicle). In this situation use the key regeneration function to make the key operational.

A) Choosing the transponder to be regenerated

From the initial screen display:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y			
◄	R	E	A	D																		

Led READ ON
Led WRITE OFF

Hold down the WRITE button for a few seconds; the display will show:

	R	E	G	E	N	.		K	E	Y	B	L	A	N	K		4	2	
<	B	A	C	K							C	O	N	T	I	N	U	E	>

Led READ ON
Led WRITE ON

Press READ to go back to the beginning
Press WRITE to change the type of transponder to be regenerated:

	R	E	G	E	N	.		K	E	Y	B	L	A	N	K		4	5	
<	B	A	C	K							C	O	N	T	I	N	U	E	>

Led READ ON
Led WRITE ON

Press READ to go back to the beginning
Press WRITE to change the type of transponder to be regenerated:

	R	E	G	E	N	.		K	E	Y	B	L	A	N	K		4	2	
<	B	A	C	K							C	O	N	T	I	N	U	E	>

Led READ ON
Led WRITE ON

Press READ to go back to the beginning
Press WRITE to change the type of transponder to be regenerated:

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B) Confirmation of transponder to be regenerated

From the screen for choosing the transponder to be regenerated:

	R	E	G	E	N	.		K	E	Y	B	L	A	N	K		4	X	
<	B	A	C	K							C	O	N	T	I	N	U	E	>

Led READ ON
Led WRITE ON

Press READ to go back to the beginning
Press WRITE for a few seconds to access the regeneration function for the chosen transponder:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y
<	B	A	C	K										W	R	I	T	E	>

Led READ ON
Led WRITE ON

C) Regenerating key 42

From the screen for choosing the regeneration function for key 42:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y
<	B	A	C	K										W	R	I	T	E	>

Insert the key to be regenerated all the way into the special hole on the front of the machine, then confirm.

Led READ ON
Led WRITE ON

Press **READ** to go back to the beginning
Press **WRITE** to proceed.
The regeneration operation starts; if there have been no errors during regeneration, the message appears:

K	E	Y	B	L	A	N	K		C	O	R	R	E	C	T	L	Y		REGENERATED
<	B	A	C	K															

At this point the key has been reset and will work properly.

Led READ ON
Led WRITE OFF

If there are problems during REGENERATION of the transponder (no transponder, cannot be copied, crypto, reading error, etc) a warning message appears (see ch. 8 “WARNING MESSAGES”).
Press READ to go back to the beginning.

C) Regenerating key 45

From the screen for choosing the regeneration function for key 45:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y
<	B	A	C	K										W	R	I	T	E	>

Insert the key to be regenerated all the way into the special hole on the front of the machine, then confirm.

Led READ ON
Led WRITE ON

Press READ to go back to the beginning
Press WRITE to proceed.

The regeneration operation starts:

	R	**E**	**G**	**E**	**N**	**.**		**K**	**E**	**Y**	**B**	**L**	**A**	**N**	**K**		**4**	**5**	
	W	**A**	**I**	**T**	**.**	**.**	**.**											**ж**	

The operation may last several seconds. The machine display shows the message "REGENERATE KEY 45, PLEASE WAIT …" with a small rotating animation. Take care not to remove the original key from the reading antenna during this operation, always wait for the operation to finish and the Ilco EZ®-Clone Plus to show the result:

K	**E**	**Y**	**B**	**L**	**A**	**N**	**K**		**C**	**O**	**R**	**R**	**E**	**C**	**T**	**L**	**Y**			**REGENERATED**
<	**B**	**A**	**C**	**K**																

At this point the key has been reset and will work properly.

Led READ ON
Led WRITE OFF

If there are problems during transponder REGENERATION (no transponder, cannot be copied, crypto, reading error, etc) a warning message will appear (see Ch. 8 "WARNING MESSAGES").
Press READ to go back to the beginning.

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7.4. Writing

After removing the key, the display will show:

	I	N	S	E	R	T		B	L	A	N	K		K	E	Y										
◄	B	A	C	K										W	R	I	T	E	►							

Led READ ON
Led WRITE ON
► FLASHING

- Press the READ button to return to the beginning
- Press the WRITE button to write

Fit the key with the uncoded transponder, then confirm that the key must be written by pressing the **WRITE** button.
This starts the operation to check whether the transponder on the key is compatible with the type of transponder previously read.
The writing operation begins. For a few seconds the display shows:

	W	R	I	T	I	N	G		I	N		P	R	O	G	R	E	S	S
						W	A	I	T	.	.	.							

Led READ OFF
Led WRITE OFF

If writing is successful, the display will show:

	O	P	E	R	A	T	I	O	N		C	O	M	P	L	E	T	E	D
				R	E	M	O	V	E		K	E	Y						

Led READ OFF
Led WRITE OFF

After a few seconds the machine will ask if other copies must be made with the same code; the display shows:

				O	T	H	E	R		C	O	P	I	E	S	?		
◄	N	O														Y	E	S	►

Led READ ON
Led WRITE ON

- Press the **READ** button to return to the beginning.
- Press the **WRITE** button to make another copy.

If there are problems when checking the transponder on the key blank fitted (no transponder, wrong, not writable, crypto, etc) a warning message will appear (see Ch. 8.1of the Operating Manual).

	T	R	A	N	S	P	O	N	D	E	R		N	O	T		D	E	T	E	C	T	E	D	
◄	B	A	C	K																						

Led READ ON
Led WRITE OFF

	I	N	C	O	M	P	A	T	I	B	L	E		K	E	Y										
◄	B	A	C	K							T	Y	P	E	-	-										

Led READ ON

Led WRITE OFF

- Press **READ** to return to the beginning of the writing operation.

7.5. Transponder identification

Type of transponder

The number in brackets, e.g. (33), indicates the **type of transponder** read on the key and is a useful piece of information for the after-sales service in order to identify transponder anomalies or malfunctions.

TRANSPONDER	TYPE
Ilco blank	(21)
Ilco blank	(22)
Ilco blank	(23)
Ilco blank	(17)
TEMIC* (Fiat)	(11)
TEMIC* (Mazda)	(12)
MEGAMOS*	(13)
PHILIPS* (orig. or emul.)	(33)
PHILIPS* (orig.)	(73)
PHILIPS* emulates MEGAMOS* (Audi)	(53)
PHILIPS* emulates MEGAMOS* (VDO)	(93)
PHILIPS* Crypto	(44)
MEGAMOS* Crypto	(48)
TEXAS INSTRUMENTS*	(4C)
TEXAS INSTRUMENTS* Crypto	(60)
TEXAS INSTRUMENTS* Crypto MITSUBISHI 3	(61)
TEXAS INSTRUMENTS* Crypto MITSUBISHI 2	(62)
TEXAS INSTRUMENTS* Crypto FORD 2	(63)
TEXAS INSTRUMENTS* Crypto (RENAULT < 2000, CHRYSLER, JEEP)	(64)
TEXAS INSTRUMENTS* Crypto (SUZUKI)	(65)
TEXAS INSTRUMENTS Crypto (SUZUKI) 2 Type	(66)
TEXAS INSTRUMENTS* Crypto (TOYOTA/LEXUS)	(67)
TEXAS INSTRUMENTS* Crypto (TOYOTA/LEXUS2)	(68)
TEXAS INSTRUMENTS Crypto (YAMAHA)	(69)
TEXAS INSTRUMENTS* Crypto (TOYOTA EU)	(70)
TEMIC* Crypto	(8C)
SAAB cannot be copied	(8D)
SOKYMAT* CRYPTO (HONDA - AUDI 2007)	(8E)
PHILIPS* Crypto OPEL	(40)
PHILIPS* Crypto NISSAN	(41)
PHILIPS* Crypto VAG	(42)
PHILIPS* Crypto VAG	(4W)
PHILIPS* Crypto MITSUBISHI-VOLVO	(4M)
PHILIPS* Crypto FIAT GRP	(4F)
PHILIPS* Crypto PEUGEOT	(45)
PHILIPS* Crypto 2	(46)
TEXAS INSTRUMENTS Crypto 2	(6F)
MEGAMOS* Crypto VOLKSWAGEN	(A1)
MEGAMOS* Crypto AUDI	(A2)
MEGAMOS* Crypto SEAT	(A3)
MEGAMOS* Crypto SKODA	(A4)

If the display shows the warning message "TRANSPONDER CRYPTO", the key in question contains a transponder with a code that cannot be cut (cannot be written).

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7.5.1. Transponder IDENTIFICATION procedure - electronic key

From the initial box:

	I	N	S	E	R	T		O	R	I	G	I	N	A	L		K	E	Y					
◄	R	E	A	D																				

Led READ ON
Led WRITE OFF

Fit the original key into the special hole and **hold down the READ button for at least 2 seconds;** the IDENTIFICATION operation will start.

For a few seconds the display shows:

	R	E	A	D	I	N	G		I	N		P	R	O	G	R	E	S	S
				W	A	I	T	.	.	.									

Led READ OFF
Led WRITE OFF

If the operation is successful, the following situations occur:

A) FIXED CODE TRANSPONDER

F	I	X	E	D		C	O	D	E		T	R	A	N	S	P	O	N	D	E	R			
	T	Y	P	E	-	-					C	O	N	T	I	N	U	E	►					

Led READ OFF
Led WRITE ON flashing
► flashing

The **WRITE** button flashes to indicate that there are other data to view.
Press the **WRITE** button again to see:

C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		X	X
C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		◄	►

- **CCC.... CCCC :** transponder electronic code
- **XX :** type of transponder

Led READ ON
Led WRITE ON

Press the READ button to return to the beginning.
Press the WRITE button to go to writing.

B) TEXAS INSTRUMENTS CRYPTO TRANSPONDER (TYPE 60-61-62-63-64-65-67-68-69)

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O						
T	Y	P	E	-	-						C	O	N	T	I	N	U	E	►						

Led READ OFF
Led WRITE ON flashing
► flashing

The **WRITE** button flashes to indicate that there are other data to view.
Press the **WRITE** button again to see:

P	**W**		*	*			**I**	**D**		*	*						**X**	**X**
M	**C**		*	*			*	*	*	*	*	*		*	*			◄	►

XX: type of transponder.
All other indications on the display give specific data for the transponder.

Note: if two asterisks are shown ""in the place of transponder ID, the transponder being read is a type not coded by Kaba Ilco or SILCA.**

Led READ ON
Led WRITE ON

Press the READ button to return to the beginning.
Press the WRITE button to go to writing.

C) **TEXAS INSTRUMENTS CRYPTO2 TRANSPONDER (6F)**

T	**R**	**A**	**N**	**S**	**P**	**O**	**N**	**D**	**E**	**R**		**T**	**E**	**X**	**A**	**S**		**CRYPTO**
T	**Y**	**P**	**E**		**6**	**F**	**-**	*	*		**C**	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**>**

6F: primary ID number, 6F indicates a "Texas Instruments* Crypto2" transponder
XX: secondary ID number, indicates the type of application for the transponder may take values of 60, 61, 62, 63, 64, 65, 66, 67, 68, 69 (see Ch 7.5)

Led READ OFF
Led WRITE ON flashing

The **WRITE** key flashes to indicate that there are other data to view.
Press **WRITE** again to see:

C	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**6**	**F**	**-**	**X**	**X**
C	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**					**<**	**>**

6F:primary ID number, 6F indicates a "Texas Instruments* Crypto2" transponder
XX:secondary ID number
ccc…ccc: transponder electronic code

N.B: if two asterisks "" appear in the place of the secondary ID, the transponder being read by the machine is unknown.**

Led READ OFF
Led WRITE ON flashing

Press READ to go back to the beginning.
Press WRITE to go on to writing.

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D) PHILIPS* CRYPTO TRANSPONDER **(40-41-42-44-45-4F-4M-4W)**

T	**R**	**A**	**N**	**S**	**.**		**B**	**B**	**B**	**B**	**B**			**C**	**R**	**Y**	**P**	**T**	**O**	**DDDD**
T	**Y**	**P**	**E**		**X**	**X**					**C**	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**>**	

Led READ OFF
Led WRITE ON flashing
> flashing

BBBBB: indicates the name or initials of the vehicle manufacturer
DDDD: indicates whether the transponder can be copied
XX: identification number of type of transponder (ID)

The **WRITE** button flashes to show that there are other data to be viewed.
Press the **WRITE** button again to see:

	I	**D**	**E**	**:**		*	*	*	*	*	*	*	*						
<	**B**	**A**	**C**	**K**							**C**	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**>**

Led READ ON
Led WRITE ON

IDE is a code of eight characters that identifies Philips* Crypto transponders.
In some cases the code is hidden and the machine display shows the message:

NO IDE

Press **READ** to go back to the beginning
The **WRITE** button is on to show that there are other data to be viewed.
Press the **WRITE** button again to see:

C	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**X**	**X**
C	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**<**	

Led READ ON
Led WRITE OFF (ON if the key can be copied)

XX: identification number of the type of transponder (ID)
CCC…CCC: transponder electronic code

Press **READ** to go back to the beginning
If the **WRITE** button LED is ON, press to go on to writing.

E) READING PINCODE ON PHILIPS* CRYPTO TRANSPONDER (45)

Ilco EZ®-Clone Plus is able to read the PINCODE valid for programming new keys with the diagnostics device on PEUGEOT vehicles that use keys with PHILIPS* Crypto transponders (45).
This function is accessible from the “IDENTIFICATION” menu, after the transponder electronic code has been shown (see paragraph above):

C	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**X**	**X**
C	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**		**<**	

Led READ ON
Led WRITE ON

XX: identification number of the type of transponder (ID)
CCC…CCC: transponder electronic code

Press **READ** to go back to the beginning
If the **WRITE** button LED is ON, press to go on to writing:

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P	**R**	**E**	**S**	**S**			**>**	**W**	**R**			**T**	**O**						
R	**E**	**A**	**D**	**I**	**N**	**G**		**P**	**I**	**N**		**C**	**O**	**D**	**E**			**<**	**>**

Led READ ON
Led WRITE ON

Press **READ** to go back to the beginning
The **WRITE** button is on to indicate that the PINCODE can be read.
Press **WRITE** again to see:

	R	**E**	**A**	**D**	**I**	**N**	**G**		**I**	**N**		**P**	**R**	**O**	**G**	**R**	**E**	**S**	**S**
			W	A	I	T	.	.	.	.								ж	

This reading operation of the original key may last several seconds. The machine display shows the message “READING, PLEASE WAIT …” with a small rotating animation. Take care **not to remove the original key from the reading antenna during this operation**, always wait until the operation is finished and the Ilco EZ®-Clone Plus shows the result:

	P	**I**	**N**		**C**	**O**	**D**	**E**	**:**	**P**	**P**	**P**	**P**						
<	**B**	**A**	**C**	**K**							**C**	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**>**

PPPP: vehicle PINCODE

Press READ to go back to the beginning
If the **WRITE** button LED is ON, press to go on to writing.

VERY IMPORTANT!!

If the key is removed before the machine has finished all the operations, the following message will appear:

	R	**E**	**A**	**D**	**I**	**N**	**G**		**E**	**R**	**R**	**O**	**R**						
<	**R**	**E**	**G**	**E**	**N**	**.**		**K**	**E**	**Y**	**B**	**L**	**A**	**N**	**K**		**4**	**5**	

at this point the key is momentarily unable to start the vehicle. In this situation **before carrying out any other operation REMOVE THE KEY FROM THE READING ANTENNA** and use the “Regenerate Key 45” function, see ch.7.3.

F) CRYPTO TRANSPONDER (TYPE 48)

	C	**R**	**Y**	**P**	**T**	**O**		**T**	**R**	**A**	**N**	**S**	**P**	**.**	**C**	**A**	**N**	**N**	**O**	**T**		**D**	**U**	**P**	**L**	**I**	**C**	**A**	**T**	**E**
T	**Y**	**P**	**E**	**-**	**-**						**C**	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**►**												

Led READ OFF
Led WRITE ON flashing
► flashing

The WRITE button flashes to indicate that there are other data to view.
Press the **WRITE** button to see**:**

I	**D**	**:**	**C**	**C**	**C**	**C**	**C**	**C**	**C**	**C**								**X**	**X**
U	**M**	**:**	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**B**								**◄**	

Led READ ON
Led WRITE OFF

XX: type of transponder.

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CCCCCCCC= transponder ID code.
BBBBBBBB = specific data for the transponder

G) CRYPTO 2 TRANSPONDER (TYPE 46)

	C	R	Y	P	T	O		T	R	A	N	S	P	.	C	A	N	N	O	T		D	U	P	L	I	C	A	T	E
◄	B	A	C	K							T	Y	P	E	-	-															

Led READ ON
Led WRITE OFF

Press the **READ** button to return to the beginning.

H) HOLDEN COMMODORE KEY

If the HOLDEN module is connected the following message will appear:

I	D	:	X	X	X	X	X	X												
◄	B	A	C	K										W	R	I	T	E	►	

Led READ ON
Led WRITE ON

XXXXXX = electronic code read from the original key.

Press the **READ** button to return to the beginning.
Press the **WRITE** button to go to writing.

I) ELECTRONIC KEY FIXED CODE TRANSPONDER EMULATION

F	I	X	E	D		C	O	D	E		T	R	A	N	S	P	O	N	D	E	R									
T	Y	P	E	-	-		Y	Y			C	O	N	T	I	N	U	E	►											

Led READ OFF
Led WRITE ON flashing
► flashing

- **YY**: Version of the electronic key (for versions over 38 only).

The WRITE button flashes to indicate that there are other data to show.
Press the **WRITE** button again**:**

C	C	C	C	C	C	C	C		C	C	C	C	C	C		Y	Y	X	X
C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C		◄	►

- **CCC.... CCCC :** electronic transponder code
- **XX :** type of transponder
- **YY**: Version of electronic key (for versions over 38 only).

Led READ ON
Led WRITE ON

- Press the READ button to go back to the beginning.
- Press the WRITE button to go on to writing.

L) CRYPTO ELECTRONIC KEY EMULATION (TYPE 60-61-62-63-64-65-67….)

T	E	X	A	S		T	R	A	N	S	P	.		C	R	Y	P	T	O											

T	**Y**	**P**	**E**	**-**	**-**		**Y**	**Y**			**C**	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**►**										

Led READ OFF
Led WRITE ON flashing
► flashing

- **YY**: Version of the electronic key (for versions over 38 only).

The WRITE button flashes to indicate that there are other data to show.
Press the **WRITE** button again:

P	W		*	*			I	D		*	*					Y	Y	X	X
M	C		*	*			*	*	*	*	*	*		*	*			◄	►

XX: type of transponder.
YY: Version of the electronic key (for versions over 38 only).

All other indications on the display give specific data for the transponder.

Note: if two asterisks are shown ""in the place of transponder ID, the transponder being read is a type not coded by Kaba Ilco or SILCA.**

Led READ ON
Led WRITE ON

- Press the READ button to return to the beginning.
- Press the WRITE button to go to writing.

M) **ELECTRONIC KEY FOR EMULATING CRYPTO TRANSPONDER (TYPE 46)**

T	R	A	N	S	P	.		P	H	-	C	R	2					
T	Y	P	E		4	6		E	H	P							<	>

Led READ ON
Led WRITE ON flashing

The WRITE key flashes to indicate that there are other data to view
When the WRITE key is pressed:

C	C	C	C	C	C												4	6
																	<	>

Led READ ON
Led WRITE ON flashing

- CCCCCC: electronic code for transponder

The WRITE key flashes to indicate that there are other data to view
When the WRITE button is pressed:

E	H	P	:	A	A	A	A	A	A	A	A					v	.	X	X
0	0	0	0		0	0	0		0									<	

Led READ ON
Led WRITE ON

- EHP: AAAAAAAA EHP ID number
- v.XX: electronic key version

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- NN: position assigned to the code in the memory (progressive number)

Press READ to go back to the beginning.
Press WRITE to make a copy.

7.6. Options

7.6.1. Changing language

- Turn off the device.
- Hold down the READ button and turn on the device.

The display will show:

S	E	L	E	C	T		L	A	N	G	U	A	G	E	:			
E	N	G	L	I	S	H									S	A	V	E ►

Press READ to scroll the various languages.
Press the WRITE button to confirm selection of the language shown on the display; the setting will be saved.

7.6.2. SNOOP MENU

Select SNOOP from the OPTIONS menu to check:

- SNOOP operating status
- battery status
- the SNOOP ID number
- SNOOP serial number
- SNOOP reset

7.6.3. C-BOX MENU

- Turn off the device
- Hold down the WRITE button and turn on the device.

The following information will appear:

- C-BOX operating status
- C-BOX software version (SW)
- C-BOX firmware version (FW)
- C-BOX ID number (IN)

Read the text on the machine display for further details.

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7.7. Running the Holden Commodore MODULE

If the HOLDEN module is connected, the software version is also shown in the ignition box.

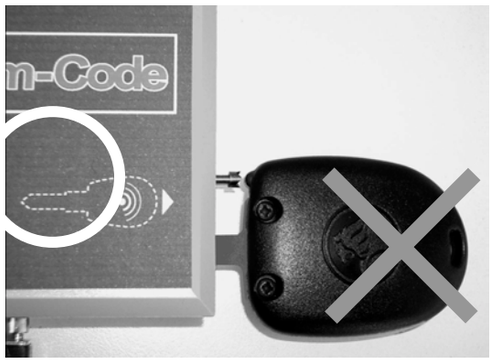
			V	E	R	.		X	X	.	Y	Y	.	z	z	z			
H	O	L	D	E	N		M	O	D		V	E	R		x	x	.	y	y

7.7.1. Copying a key with the HOLDEN module

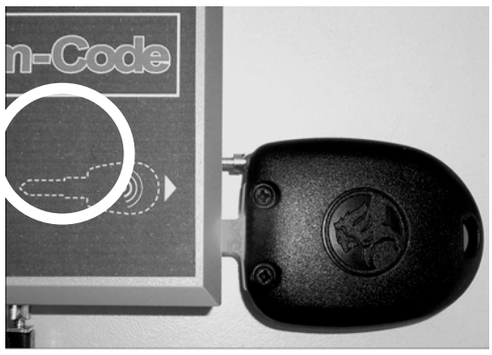
	I	**N**	**S**	**E**	**R**	**T**		**O**	**R**	**I**	**G**	**I**	**N**	**A**	**L**		K	E	Y						
◄	R	E	A	D																					

Led READ ON
Led WRITE OFF

ATTENTION: **Fit the original key to be copied into the module, taking care that contact takes place between the terminal on the key and the sprung contact on the module through which the code is communicated.**



NO!



YES!

Fig. 9

If the device detects the key in the HOLDEN module the reading operation begins. For a few seconds the display will show:

	R	**E**	**A**	**D**	**I**	**N**	**G**		**I**	**N**		**P**	**R**	**O**	**G**	**R**	**E**	**S**	**S**
				W	**A**	**I**	**T**	.	.	.									

Led READ OFF
Led WRITE OFF

If there are problems when reading, a warning message appears (see ch. 8).

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If the electronic code is read successfully, the display will show:

R	E	A	D	I	N	G		S	U	C	C	E	S	S	F	U	L		
			R	**E**	**M**	**O**	**V**	**E**		**K**	**E**	**Y**							

Led READ OFF
Led WRITE OFF

	E	**N**	**T**	**E**	**R**		**K**	**E**	**Y**		**B**	**L**	**A**	**N**	**K**		O	N		MODULE
◄	B	A	C	K										W	R	I	T	E	►	

Led READ ON
Led WRITE ON
► flashing

After fitting the key blank into the module and pressing the **WRITE** button, for a few seconds the display will show:

	W	**R**	**I**	**T**	**I**	**N**	**G**		**I**	**N**		**P**	**R**	**O**	**G**	**R**	**E**	**S**	**S**
						W	A	I	T	.	.	.							

Led READ OFF
Led WRITE OFF

If writing is successful, the display will show:

	O	**P**	**E**	**R**	**A**	**T**	**I**	**O**	**N**		**C**	**O**	**M**	**P**	**L**	**E**	**T**	**E**	**D**
				R	**E**	**M**	**O**	**V**	**E**		**K**	**E**	**Y**						

Led READ OFF
Led WRITE OFF

After a few seconds the machine will ask whether to make other copies of the key with the same code; the display shows:

				O	**T**	**H**	**E**	**R**		**C**	**O**	**P**	**I**	**E**	**S**	**?**			
◄	N	O														Y	E	S	►

Led READ ON
Led WRITE ON

Press the **READ** button to return to the beginning.
Press the **WRITE** button to make another copy.

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8. WARNING MESSAGES

During normal operation, when carrying out the reading and writing procedures the machine is predisposed to detect the problems and anomalies that may occur during these operations.
The paragraphs below show all the possible problems and the warning messages they generate for the operator.

8.1. Messages during key reading and writing

If there are problems in reading transponders, a warning message appears.

1	T	R	A	N	S	P	O	N	D	E	R		**N**	**O**	**T**		**D**	**E**	**T**	**E**	**C**	**T**	**E**	**D**		

2	R	E	A	D		E	R	R	O	R	.	C	H	E	C	K		K	E	Y	POSITION					

3	K	E	Y		B	L	A	N	K		N	O	T		C	O	R	R	E	C	T					
												T	I	P	O	-	-									

4	**C**	**R**	**Y**	**P**	**T**	**O**		**T**	**R**	**A**	**N**	**S**	**P**	**.**	**C**	**A**	**N**	**N**	**O**	**T**		**D**	**U**	**P**	**L**	**I**	**C**	**A**	**T**	**E**

5			R	E	A	D	I	N	G		E	R	R	O	R											

6			W	R	I	T	I	N	G		E	R	R	O	R											

7		**R**	**E**	**A**	**D**	**I**	**N**	**G**		**E**	**R**	**R**	**O**	**R**												
	<	**R**	**E**	**G**	**E**	**N**	**.**		**K**	**E**	**Y**	**B**	**L**	**A**	**N**	**K**		4	5							

8	E	X	E	C	U	T	E		C	O	P	Y	?													
	<	**N**	**O**														**Y**	**E**	**S**	**>**						

Message meanings

1) the key does not have a transponder, or it is badly positioned;
2) the key is not properly positioned in the device antenna;
3) the key blank used for the copy is incompatible with the original.
4) the key contains a CRYPTO not duplicated transponder of the type:
   40-41-44-4M-4F-4W-45-46-48-8E
5) the key contains a faulty transponder or one which cannot be read or it has been badly positioned.
6) the writing operation was not carried out correctly by the device.
7) the reading operation was not carried out correctly; use the key regeneration function.
8) the key has a particular CRYPTO transponder (see page 7.2.8 and 7.5.1 C) .

Suggestions for solving the problem

Case 1, try reading after placing the key in different positions.
Case 2, try reading the key after raising it by a few millimetres.
Case 3, change the key blank using a compatible key indicated by the Transponder Guide.
Case 4, the key read CANNOT BE COPIED;
In case 5 use a new operational transponder key or try the key again.
Case 6, the key blank may contain a faulty transponder or one protected from writing. This fault may be caused by electro-magnetic waves generated by electronic equipment in the vicinity (see Ch. 4.4 “Positioning”).
Case 7, remove the key from the reading antenna and use the key regeneration function (see ch. 7.3).
Case 8, see page 7.2.8 and 7.5.1C.

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8.2. Special events that could occur when copying a Philips* CR2 transponder:

During the reading and copying stage for the original key, and during the SNOOP initialization and test stages, the Ilco EZ®-Clone Plus machine makes checks to ensure that the calculation circuit board (C-BOX) and Snoop work properly; in the case of anomalies the display may show:

E	**R**	**R**	**O**	**R**			**C**	**B**	**O**	**X**		**C**	**O**	**D**	**:**	**X**	**X**	**X**
<	**B**	**A**	**C**	**K**														

Anomaly: An error has occurred on the module, indicated by code COD=XXX
Solution: Turn off the Ilco EZ®-Clone Plus machine and C-Box module for a few seconds, turn on again and repeat the operation. If the problem persists, contact Kaba Ilco Tech Support and communicate the error code shown on the machine display.

	C	**H**	**E**	**C**	**K**		**P**	**O**	**S**	**I**	**T**	**I**	**O**	**N**				**SNOOP**
										C	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**>**

Anomaly: SNOOP has not been found by the Ilco EZ®-Clone Plus antenna.
Solution: Check the position of SNOOP on the machine antenna, press “WRITE” to continue

	R	**E**	**P**	**L**	**A**	**C**	**E**		**S**	**N**	**O**	**O**	**P**					**SNOOP**
<	**B**	**A**	**C**	**K**														

Anomaly: The battery power is too low to guarantee proper operation of SNOOP.
Solution: Replace the SNOOP battery (consult the SNOOP instructions sheet).

E	**R**	**R**	**O**	**R**		**S**	**N**	**O**	**O**	**P**			**C**	**O**	**D**	**:**	**X**	**X**	**X**
<	**B**	**A**	**C**	**K**															

Anomaly: An error has occurred on SNOOP, indicated by code COD=XXX
Solution: Use the diagnostic functions from the Ilco EZ®-Clone Plus SNOOP options, if necessary reset SNOOP. If the problem persists, contact Kaba Ilco Tech Support and communicate the error code shown on the machine display.

S	**N**	**O**	**O**	**P**		**D**	**A**	**T**	**A**		**I**	**N**	**C**	**O**	**M**	**P**	**L**	**.**		**REPEAT**
															B	**A**	**C**	**K**	>	

Anomaly: During STAGE 2 when SNOOP is reading data from the vehicle the data needed to make a copy has not been found.
Solution: Repeat STAGE 2 making sure SNOOP signals successful memorization of the data (LEDs flashing).

S	**N**	**O**	**O**	**P**		**D**	**A**	**T**	**A**		**W**	**R**	**O**	**N**	**G**				**REPEAT**
										C	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**>**	

Anomaly: During STAGE 2 when SNOOP is reading data from the vehicle the data needed to make a copy has not been properly read, or in STAGE 4 the original key being used is different from that used in STAGE 2.
Solution: Repeat the whole copying process using the original key to be copied.

	K	**E**	**Y**		**I**	**N**	**C**	**O**	**M**	**P**	**A**	**T**	**I**	**B**	**L**	**E**			
											C	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**>**

Anomaly: In STAGE 4 the original key being used is different from that used in STAGE 1, or you are trying to copy the original key onto a key that is not an EK3P.

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Solution: Insert the original key used in STAGE 1 and continue, or insert an EK3P key and continue.

L	**A**	**S**	**T**		**W**	**R**	**I**	**T**	**I**	**N**	**G**		**F**	**O**	**R**		**E**	**H**	**P**
											C	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**>**

Cause: EK3P keys can be re-programmed only 3 times. This message indicates that the current programming operation is the last one possible.

	E	**H**	**P**		**N**	**O**	**T**		**W**	**R**	**I**	**T**	**A**	**B**	**L**	**E**			**REPLACE**
										C	**O**	**N**	**T**	**I**	**N**	**U**	**E**	**>**	

Anomaly: EK3P keys can be re-programmed only 3 times. This message indicates that the key is no longer programmable.
Solution: Insert a new EK3P key

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9. MAINTENANCE

ATTENTION: **For repairs or replacement of parts for maintenance, the 'CE' mark is guaranteed only if original spare parts provided by the manufacturer are used.**

The machine does not need any special maintenance.

ATTENTION: **Do not use compressed air**

ATTENTION: **Do not open the machine for any reason whatsoever**

Before starting any type of maintenance (check-up or replacement of parts) read the following instructions:

Never carry out any maintenance operation with the machine on

Always disconnect from the mains

Follow the instructions in the manual

Use original spare parts.

9.1. Trouble shooting

FAULT	PROBABLE CAUSE
DISPLAY – WITH THE MACCHINE ON NOTHING APPEARS ON THE DISPLAY	A) CHECK CONNECTION WIRING B) REPLACE: – DISPLAY (AFTER-SALES SERIVCE) – ELECTRONIC CONTROL CIRCUIT BOARD (AFTER-SALES SERVICE)
KEY PAD – DOES NOT WORK LOCALLY (STAND-ALONE) – DOES NOT ACCEPT COMMANDS	A) CHECK CONNECTION WIRING – REPLACE KEY PAD (AFTER-SALES SERVICE)
ANTENNA – DOES NOT READ OR WRITE	A) CHECK WIRING – REPLACE KEY PAD (AFTER SALES SERVICE)
CBOX EXPANSION BOARD CBOX INTERNAL ERROR = XX (XX WITH VALUES 1 TO 20)	A) THE MESSAGE INDICATES THAT AN ERROR HAS OCCURRED ON CBOX. TURN THE DEVICE OFF, THEN ON AND TRY THE OPERATION AGAIN. B) REPLACE: ELECTRONIC CIRCUIT BOARD

The indications above relate to the probable causes of the faults described. They are to be considered indicative and not a comprehensive list of the likely causes of faulty operation.
In the event of any other problems of faulty operation, contact Kaba Ilco Tech Support.

9.2. Checking the wiring

When it becomes necessary to check the internal wiring on the machine proceed as follows:

- Turn off the machine
- Disconnect the supply cable
- Remove the 4 plastic feet
- Remove the 4 screws inside the housing for the feet
- Remove the cover carefully, paying attention to the wiring

Checking the wiring

Check that all the connectors are properly fitted.

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10. WASTE DISPOSAL

EU regulations establish special arrangements for the disposal of waste[1].

Waste deriving from the machine

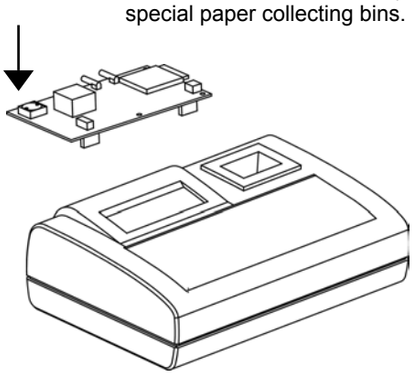
The machine produces no waste during its use.

Machine

The machine is made of re-usable materials. Re-cycling is recommended ecological practice.

Packing

The machine is consigned in a cardboard packing box which can be re-used if undamaged. When it is to be thrown away it is classified as solid urban waste and it should be placed in the special paper collecting bins.



ATTENTION: the machine contains a non-rechargeable lithium battery that must be disposed of in the special collection bins.

Information for Users

as per art. 10 of Directive 2002/96/CE of 27/01/2003
regarding waste from electric and electronic appliances (RAEE),

- The symbol illustrated above, also found on the machine, indicates that it has been placed on the market and must be included in separate rubbish collection when the user wishes to dispose of it (including all components, sub-assemblies and consumables that are integrated in the product).
- For information about the collection system for such appliances please contact **SILCA S.p.A.** or another subject registered in the various National Rolls for other countries in the European Union. Household waste (or of similar origin) can be included in the separate collection system for urban waste.
- On purchasing a new appliance of equivalent type, the old one can be consigned to the dealer. The dealer will then contact whoever is responsible for collecting the appliance.
- Suitable separate collection of the unused appliance and its dispatch for treatment, recovery and environmentally compatible disposal, makes it possible to avoid potential negative effects on the environment and human health, and aids recycling and the recovery of the materials used.
- Unauthorised disposal of the product by users involves the application of the sanctions provided for in received Directives 91/156/CE and 91/689/CE.

[1] Waste is any substance or object deriving from human activity or natural cycles, thrown way or to be thrown way.

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11. ASSISTANCE

Kaba Ilco provides full assistance to purchasers of the machine. To ensure complete safety for the operator, any job not specified in this manual should be carried out by the manufacturer.

11.1. How to request service

The warranty attached to the machine ensures free repairs or replacements of faulty parts within 12 months of purchase. All other repairs must be arranged by the customer with Kaba Ilco Tech Support.

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